CLAIMS

What is claimed is:

1. A system for organizations to develop, test, execute and analyze messaging programs defining a message application server comprising:

(a) a dialog designer configured to provide a user interface to organization's program designers and marketers, to allow for rapid program creation, to offer the ability to select the type of a program, to select the service addresses for a program, to schedule programs for execution, to upload messaging user data into lists, to create segments, to download program result data, to test programs, to provide reports, including real-time reports, on messaging programs;

(b) a dialog server configured to execute messaging programs by means of program instructions, to manage simultaneous programs, to store messaging user results and message delivery status, to maintain state and session context across message invocations for messaging users within an messaging program;

(c) a message exchange configured to route messages to and from messaging service providers, to manage service addresses, to perform message billing and connected to messaging service providers;

whereby organizations can execute messaging programs with messaging users by means of said messaging service providers.

2. A system of claim 1, wherein a plurality of organizations hierarchically organized can independently develop, test, execute and analyze messaging programs.

3. A system of claim 1, wherein said organizations are not messaging service providers.

4. A system of claim 1, wherein said message application service is connected to a plurality of messaging service providers systems.

5. A system of claim 1, wherein said message application server is connected to messaging service providers systems by means of a data network, including but not limited to, the Internet and private internet; using a variety of messaging protocols, including but not limited to, SMTP, SMPP, and instant messaging.

6. A system of claim 1, wherein said message application server is connected to said organizations by means of a data network, including but not limited to, the Internet and private intranets.

7. A system of claim 1, wherein the messaging devices used by the messaging users use SMS, EMS, MMS, WAP, HTML, xHTML, instant messaging, e-mail, interactive TV, client side execution environments or any other messaging technology.

8. A system of claim 1, wherein the messaging programs and instructions are designed using a GUI design tool and have a text based representation.

9. A system of claim 1, further comprising a data database to store messaging program data; an opt-out system configured to store lists of users that have opted-out

of messaging programs for a particular opt-out scope; a billing system to rate the messaging programs; an address manager to create, configure, provision, and administer messaging program service addresses; and one or more message detail record databases to record all critical service level or billing events.

10. A system of claim 9, wherein the data stored in said data database is used in future messaging programs.

11. A system of claim 1, wherein the organization accesses the dialog designer using a web browser from a remote computer by means of a data network.

12. A system of claim 1, wherein applications executed by the organization can interface with the message application server by means of web service calls using protocols, including but not limited to SOAP.

13. A system of claim 1, wherein the message application server is integrated with said organizations systems, including but not limited to customer relationship management systems ("CRM").

14. A system of claim 1, wherein the dialog server can access messaging instructions from remote computer systems connected to the dialog server by means of a data network whereby integration with remote systems can be achieved.

15. A system of claim 1, wherein the messaging instructions, includes but is not limited to, messaging primitives, unconditional logic primitives, conditional logic

primitives, session variable primitives, input/output primitives, remote connectivity primitives whereby any messaging program of arbitrary complexity can be developed and integrated with remote systems connected to a data network.

16. A system of claim 1, wherein said dialog server maintains session state and context across message invocations for a pair consisting of a messaging device address and a messaging program.

17. A system of claim 1, wherein said dialog server, said message exchange and the connection to the messaging service providers store message into queues with flow control techniques whereby queue overload is prevented or mitigated.

18. A method for organizations to develop, execute and analyze messaging programs comprising the steps of:

(a) said organization's program designers designing said messaging program;

(b) said program designer selecting a segment for push programs;

(c) said program designers selecting the program service addresses;

(d) said program designers testing said messaging program, iterating back to step (a) until satisfied;

(e) executing said messaging program where said messaging program is either started manually or at a scheduled date;

(f) messaging users interacting with said messaging program and optionally storing said messaging users responses and other messaging user data in a data database;

(g) stopping said messaging program either manually or at a scheduled date;

(h) analyzing said messaging program using the data captured during the program execution;

whereby organizations can execute messaging programs with messaging users by means of messaging service providers.

19. The method of claim 18, whereby the data captured as part of executing a messaging program is used in a subsequent messaging program.

20. The method of claim 18, whereby segments are created from list data imported by the program designer into a data database, and from results data generated by the execution of prior messaging programs.

21. The method of claim 18, whereby said organizations deliver coupons, offers and promotion to said messaging users.

22. The method of claim 18, further comprising the steps of storing important service level and billable events in one or more message detail record ("MDR") database(s).

23. The method of claim 22, further comprising the steps of billing for messaging usage:

(a) importing the message detail records generated by the message application server in a billing MDR database;

(b) rating and billing said message detail records;

(c) generating organization invoices and service provider account payable reports;

24. The method of claim 23, further comprising the steps of reconciling the service provider invoices for messaging transport costs with the service provider account payable reports generated from the message application server message detail records

25. The method of claim 23, further comprising the steps of:

(a) receiving message detail records from the messaging service providers;

(b) importing said message detail records in said billing MDR database;

(c) rating and billing said message detail records;

(d) generating service provider account payable reports;

(e) reconciling the accounts payable reports generated from said message detailed records with the accounts payable reports generated from the message application server MDR's.

26. A method for organizations to push messages to messaging users comprising the steps of:

(a) creating a segment;

(b) starting a messaging program;

(c) executing a bulksend in a dialog server which retrieves the messaging users messaging device address and data defined in the segment created in step (a) and filtering out the messaging device addresses of users that have opted-out;

(d) executing in said dialog server messaging program instructions for each messaging device address originating from said bulksend;

(e) assuming the messaging program instructions include sending a message to said messaging device, routing said message to a message exchange to the appropriate messaging service provider system, and storing any message status delivery returned to said message exchange;

whereby said messaging users whose messaging device address is in said segment receives a push message.

27. A method for organizations to deploy pull messaging programs comprising the steps of:

(a) receiving in a message exchange a messaging device originated message from a messaging user by means of said messaging device messaging service provider systems;

(b) forwarding said message from said message exchange to a dialog server;

(c) looking up the appropriate session context and messaging program based on the messaging device address and the program service address;

(d) executing the messaging program instructions in said dialog server upon receiving said message and based on the session state and context;

(e) assuming the messaging program instructions include sending a reply message to said messaging device, routing said message in said message exchange to the appropriate messaging service provider, and storing any message status delivery returned my the message exchange;

whereby said messaging users who sent a messaging device originated message receives a reply message on his messaging device.

28. A system for developing, analyzing, deploying and monitoring targeted messaging applications, said system comprising:

a plurality of client systems;

a plurality of message service provider systems at least one of which implements a different messaging technology;

a message application server in communication with each of said plurality of client systems and each of said plurality of message service provider systems;

wherein said plurality of client systems are configured to interface with said message application server to enable said plurality of client systems to develop, analyze, test, deploy and monitor messaging applications, said messaging applications to generate messages, receive messages from and send messages to said plurality of message service provider systems, and

wherein said message application server is configured to determine and route said messages to said plurality of message service provider systems regardless of said message service provider systems implemented messaging technology.

29. A system as in claim 28 wherein said message application server further comprises a dialog server configured to execute messaging applications by means of application instructions, to manage simultaneous message application, to store messaging user results and message delivery status and to maintain state and session

context across message invocations for messaging users within an messaging application.

30. A system as in claim 29 wherein said message application server further comprises a message exchange in communication with said dialog server, said message exchange is configured to
to route messages to and from said messaging service providers.

31. A system as in claim 30 wherein said message application server further comprises a dialog designer in communication with said dialog server and said message exchange, said dialog designer configured to provide an interface to said client systems to facilitate rapid message application creation, the ability to select the type of message application, to select the service address for a message application, scheduling of message applications for execution, uploading of messaging user data into lists, creation of segments, downloading of message application result data, testing of message applications.

32. A system as in claim 29 wherein said dialog server comprises:

an execution unit to process the messaging device originated messages and other events;

a scheduler unit to start and stop messaging applications or send scheduled events to the execution unit at scheduled times;

an application service system to manage the executable applications;

a session system to manage messaging users sessions;

a user system to manage messaging users properties;

an opt-out system to manage the opt-in and opt-out status of messaging device addresses;

an application instruction unit to retrieve and cache required application instructions;

a bulksend unit to send large pushes to messaging device addresses within an application segment;

a dialog server in-queue to store messages or events for execution by said execution unit;

a message delivery status system to record message delivery errors returned by said message exchange;

a monitoring unit to monitor the state of said dialog server;

a dialog server database to store information pertaining to said dialog server;

a dialog server message detail record database to log all accounting or service level relevant event within said dialog server;

a dialog designer interface to connect the dialog server to the dialog designer; and

a message exchange to connect the dialog server to the message exchange.

33. A system as in claim 32, wherein said message exchange further comprises:

an out queue to store termination messages and dialog server connection messages;

an outgoing message router to route messages based on the application service address and the messaging device address;

a plurality of outgoing handlers, each for a specific messaging technology, to send messages to a particular messaging service provider gateway;

a plurality of incoming handlers, each for a specific messaging technology, to accept messaging device originated messages from the messaging service provider gateways;

an incoming message router to route messaging device originated message to the dialog server;

an address manager to create, configure, provision and administer application service addresses;

a billing system configured to display MDR logs, to rate and invoice messaging applications;

a monitoring unit to monitor the state of the message exchange;

a message exchange database to handle the data storage needs of the message exchange;

a message exchange message detail record database to log all billing or service level relevant events within the message exchange system;

a dialog server interface to connect the message exchange to the dialog server;

a dialog designer to connect the message exchange to the dialog designer;

a billing MDR database 410 used to hold the MDR records for billing purposes.

34. A system as in claim 33, wherein said dialog designer further comprises:

an HTTP interface to enable said client systems to access said message application server;

a Web Service interface to enable said client systems to automate access to said message application server;

a service layer to implement the core functionality of the dialog designer;

a dialog server interface to connect the dialog designer to the dialog server;

a message exchange interface to connect the dialog designer to the message exchange;

a dialog designer database to store dialog designer transaction information;

a dialog designer data database to store messaging application related information; and

a dialog server message detail record database to store billing and service level operations information.

35. A system as in claim 31 wherein said dialog designer further comprises a GUI design tool component to enable said client systems to develop, analyze, test and deploy messaging applications.

36. A system as in claim 31 wherein said message applications developed using said dialog designer include interactive message applications.

37. A system as in claim 36 wherein said interactive message applications include two-way text messaging applications, multimedia messaging applications, instant messaging applications and Macormedia's FLASH based messaging application.

38. A system as in claim 31, wherein said dialog designer further comprises a client interface component to reside on said client system and a server interface component to reside on said message application server, said client interface component in communication with said server interface component to enable said client system to access said dialog server.

39. A system as in claim 38, wherein said client interface component is a WEB browser.

40. A system as in claim 28 wherein said message service provider systems comprises:

a plurality of messaging devices, each having a messaging device address, and

a messaging service provider gateway communicatively connected to said messaging application server to provide for aggregation and delivery of said messages to said messaging device addresses.

41. A system as in claim 28 wherein said plurality of messaging device is selected form the group consisting of data enabled cell phones, wireless enabled PDA's, instant messaging devices, mobile e-mail devices and interactive TV devices.

42. A system as in claim 28 wherein said client systems comprises customer relationship management systems.

43. A system as in claim 30 wherein said message exchange is further configured to to manage service addresses and to perform said message billing.

44. A system as in claim 31 wherein said dialog designer is further configured to facilitate reporting of said message application transactions.